

## WHAT IS CLAIMED IS:

1. A content relay service device for relay transferring a Web content opened to the public on the Internet while reducing a data amount thereof, comprising  
5 a computer information processing system connected to the Internet, wherein:

the content relay service device manages a member information database in which a member is registered, the member is a service receiver who uses a browser installed terminal subscribed to a communication service of a data amount charging type network connected to the Internet;  
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the content relay service device communicates with the browser installed terminal of the member which makes access thereto to authenticate the browser installed terminal, the authentication is performed by a predetermined authentication procedure with reference to the member information database;  
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a Web content "C" specified by the browser installed terminal "B" of the member "A" is obtained from the Internet, the obtained Web content "C" is processed by a data amount reducing mechanism, and a Web content "D" thus processed is transmitted to the browser installed terminal "B,"  
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a data reduction achievement is calculated when the Web content "C" is processed by the data amount reducing mechanism to be converted into the Web content "D," and data of the data reduction achievement is recorded while being correlated with the member "A" of the member information database; and  
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the data of the data reduction achievement for each  
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member recorded in the member information database is edited and outputted in a predetermined manner.

2. A content relay service device according to claim 1, wherein the data of the data reduction achievement is edited in a reduction achievement report of a Web document form, and the reduction achievement report regarding the member "A" is presented according to a request from the browser installed terminal "B."

3. A content relay service device according to claim 1, wherein as a data reduction achievement when the Web content "C" is processed by the data amount reducing mechanism to be converted into the Web content "D," communication fees in the data amount charging type network corresponding to the reduced data amount is calculated.

4. A content relay service device according to claim 2, wherein as a data reduction achievement when the Web content "C" is processed by the data amount reducing mechanism to be converted into the Web content "D," communication fees in the data amount charging type network corresponding to the reduced data amount is calculated.

5. A content relay service device according to any one of claims 1 to 4, further comprising:

a specification information obtaining mechanism for obtaining specification information regarding a function provided in the browser installed terminal through communications with the terminal, which makes access; and

a terminal differentiating mechanism for differentiating the terminal into a type "a" loading a

predetermined compressed data decompression program, and a type "b" loading no compressed data decompression program based on the specification information obtained from the browser installed terminal,

5        wherein the data amount reducing mechanism reduces a data amount of the Web content based on a system needing no compressed data decompression program for the browser installed terminal of the type "a," and reduces a data amount of the Web content based on a system including a  
10       predetermined compression algorithm for the browser installed terminal of the type "b."

6.       A content relay service device according to claim 5, further comprising a program sending mechanism for sending the compressed data decompression program to the browser installed terminal, which makes access, wherein

15       the terminal differentiating mechanism differentiates a terminal capable of loading the compressed data decompression program from the browser installed terminal of the type "a," and the compressed data decompression program is downloaded for the  
20       differentiated terminal by the program sending mechanism.

7.       A content relay service device according to any one of claims 1 to 4, further comprising:

25       a cache mechanism for saving the Web content "D" before data amount reduction processing for a predetermined period; and

30       a transmission mechanism for transmitting the Web content "D" saved in the cache mechanism when a certain browser installed terminal which makes access after

authentication specifies the Web content "C" which is an origin of the Web content "D."

8. A content relay service device according to claim 5, further comprising:

a cache mechanism for saving the Web content "D" before data amount reduction processing for a predetermined period; and

a transmission mechanism for transmitting the Web content "D" saved in the cache mechanism when a certain browser installed terminal which makes access after authentication specifies the Web content "C" which is an origin of the Web content "D."

9. A content relay service device according to claim 6, further comprising:

a cache mechanism for saving the Web content "D" before data amount reduction processing for a predetermined period; and

a transmission mechanism for transmitting the Web content "D" saved in the cache mechanism when a certain browser installed terminal which makes access after authentication specifies the Web content "C" which is an origin of the Web content "D."

10. A content relay service device for relay transferring a Web content opened to the public on the Internet while reducing a data amount thereof, comprising a computer information processing system connected to the Internet, wherein:

a service receiver is a user of a browser installed terminal subscribed to a communication service of a data amount charging type network connected to the Internet;

the content relay service device communicates with the browser installed terminal of the user which makes access thereto to authenticate the browser installed terminal in which the user is a temporary member, the authentication is performed by a predetermined authentication procedure based on personal information of the user, obtained through the communication;

a Web content "C" specified by the browser installed terminal "B" of the temporary member "A" is obtained from the Internet, the obtained Web content "C" is processed by a data amount reducing mechanism, and a Web content "D" thus processed is transmitted to the browser installed terminal "B"; and

a data reduction achievement is calculated when the Web content "C" is processed by the data amount reducing mechanism to be converted into the Web content "D," and the data of the data reduction achievement is edited and outputted in a predetermined manner.

11. A content relay service device according to claim 10, wherein the data of the data reduction achievement is edited in a reduction achievement report of a Web document form, and the reduction achievement report regarding the member "A" is presented according to a request from the browser installed terminal "B."

12. A content relay service device according to claim 10, wherein as a data reduction achievement when the Web content "C" is processed by the data amount reducing mechanism to be converted into the Web content "D," communication fees in the data amount charging type network corresponding to the reduced data amount is

calculated.

13. A content relay service device according to claim 11, wherein as a data reduction achievement when the Web content "C" is processed by the data amount reducing mechanism to be converted into the Web content "D," communication fees in the data amount charging type network corresponding to the reduced data amount is calculated.

14. A content relay service device according to any one of claims 10 to 13, further comprising:

a specification information obtaining mechanism for obtaining specification information regarding a function provided in the browser installed terminal through communications with the terminal, which makes access; and

a terminal differentiating mechanism for differentiating the terminal into a type "a" loading a predetermined compressed data decompression program, and a type "b" loading no compressed data decompression program based on the specification information obtained from the browser installed terminal,

wherein the data amount reducing mechanism reduces a data amount of the Web content based on a system needing no compressed data decompression program for the browser installed terminal of the type "a," and reduces a data amount of the Web content based on a system including a predetermined compression algorithm for the browser installed terminal of the type "b."

15. A content relay service device according to claim 14, further comprising a program sending mechanism for sending the compressed data decompression program to

the browser installed terminal, which makes access, wherein

the terminal differentiating mechanism differentiates a terminal capable of loading the compressed data decompression program from the browser installed terminal of the type "a," and the compressed data decompression program is downloaded for the differentiated terminal by the program sending mechanism.

16. A content relay service device according to any one of claims 10 to 13, further comprising:

a cache mechanism for saving the Web content "D" before data amount reduction processing for a predetermined period; and

a transmission mechanism for transmitting the Web content "D" saved in the cache mechanism when a certain browser installed terminal which makes access after authentication specifies the Web content "C" which is an origin of the Web content "D."

17. A content relay service device according to claim 14, further comprising:

a cache mechanism for saving the Web content "D" before data amount reduction processing for a predetermined period; and

a transmission mechanism for transmitting the Web content "D" saved in the cache mechanism when a certain browser installed terminal which makes access after authentication specifies the Web content "C" which is an origin of the Web content "D."

18. A content relay service device according to claim 15, further comprising:

a cache mechanism for saving the Web content "D" before data amount reduction processing for a predetermined period; and

5 a transmission mechanism for transmitting the Web content "D" saved in the cache mechanism when a certain browser installed terminal which makes access after authentication specifies the Web content "C" which is an origin of the Web content "D."

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